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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/810,352	03/16/2001	Graeme N. McClure	ABMS-0116/B000300	9203

23377 7590 09/24/2003

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EXAMINER

DOUGHERTY, ANTHONY T

ART UNIT	PAPER NUMBER
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2863

DATE MAILED: 09/24/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/810,352

Applicant(s)

MCCLURE ET AL.

Examiner

Anthony T. Dougherty

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09 September 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-16 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 16 March 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1, 3, 4, and 6, 7, and 6-13 rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent No. 5,768,079 to Buell.

With regard to claims 1 and 10, Buell discloses monitoring three phases of a power line (see column 3 line 47 through line 67), determining a number of faults in the three phases (see column 5 line 15 through line 34) and opening only the phases on the power line that have faults (see column 5 line 35 through line 47), and if only one fault is determined monitoring the fault to determine if the fault evolves into another phase and if so opening only the at fault phases of the recloser (see column 5 line 48 through line 56 & column 6 line 8 through line 13).

With regard to claims 3 and 11 and applying the rejection of claims 1 and 10 (respectively) above, Buell discloses comparing a line current of each of the three phases to a predetermined current (see column 4 line 64 through line 67 and column 5 line 35 through 39) if this current exceeds the predetermined current then a fault has occurred (see column 5 line 42 through line 46).

With regard to claims 4 and 12 and applying the rejection of claims 1 and 10 (respectively) above, Buell discloses detecting a fault in one of three phases (see column 5 line 15 through line 19), starting a countdown timer associated with each faulted phase (see column 5

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line 19 through line 21), and determining the number of faults still present after the timer has expired (see column 5 line 21 through line 34).

With regard to claims 6 and 13 and applying the rejection of claims 1 and 10 (respectively) above, Buell discloses opening phases on the power line that have the associated fault by opening only one phase if only one fault is determined, the only one phase being associated with the fault, opening only two phases if only two faults are determined, the only two phases being associated with the two faults, and opening all three phases if three faults are determined (see column 9 line 17 through line 32).

With regard to claim 7, Buell discloses a recloser control system for a power line with a recloser with three poles each pole associated with one of the three phases (see column 3 line 47 through line 67), the recloser capable of opening or closing the associated phase of the power line, (see column 5 line 35 through line 47), comparing a line current of each of the three phases to a predetermined current (see column 4 line 64 through line 67 and column 5 line 35 through 39) if this current exceeds the predetermined current then a fault has occurred (see column 5 line 42 through line 46), and opening phases on the power line that have the associated fault by opening only one phase if only one fault is determined, the only one phase being associated with the fault, opening only two phases if only two faults are determined, the only two phases being associated with the two faults, and opening all three phases if three faults are determined (see column 9 line 17 through line 32), and if only one fault is determined monitoring the fault to determine if the fault evolves into another phase and if so opening only the at fault phases of the recloser (see column 5 line 48 through line 56 & column 6 line 8 through line 13).

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With regard to claims 8, and applying the rejection of claim 7 above, Buell discloses comparing a line current of each of the three phases to a predetermined current (see column 4 line 64 through line 67 and column 5 line 35 through 39) if this current exceeds the predetermined current then a fault has occurred (see column 5 line 42 through line 46).

With regard to claim 9 and applying the rejection of claim 7 above, Buell discloses detecting a fault in one of three phases (see column 5 line 15 through line 19), starting a countdown timer associated with each faulted phase (see column 5 line 19 through line 21), and determining the number of faults still present after the timer has expired (see column 5 line 21 through line 34).

With regard to claim 14, 15, and 16, and applying the rejections of claims 1, 10, and 14 above (respectively) above, Buell discloses controlling the recloser to do at least one of trip, reclose, or lockout (see column 6 line 1 through line 32), responsive to the fault being detected (see column 5 line 48 through line 56) on one phase independently (see column 9 line 25 through line 32), two phases sequentially (see column 5 line 48 through line 56 & column 6 line 8 through line 13), or three phases simultaneously (see column 10 line 11 through line 31).

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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4. Claims 2 and 5 rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 5,768,079 to Buell in view of U.S. Patent No. 3,558,985 to Krolski et al.

With regard to claims 2 and 5, the primary reference to Buell discloses monitoring three phases of a power line (see column 3 line 47 through line 67), determining a number of faults in the three phases (see column 5 line 15 through line 34) and opening only the phases on the power line that have faults (see column 5 line 35 through line 47), and if only one fault is determined monitoring the fault to determine if the fault evolves into another phase and if so opening only the at fault phases of the recloser (see column 5 line 48 through line 56 & column 6 line 8 through line 13). However, Buell fails to disclose a fault occurs when a protection element on the recloser enters pickup.

The secondary reference to Krolski et al. discloses a fault occurs when a predetermined overcurrent is sensed in one or more of the phases by an overcurrent sensing portion (i.e. a protection element enters pickup – see column 3 line 24 through line 30 and Figure 1 items 6, 6', and 6'').

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have specified the fault occurrence condition of Krolski et al. be utilized to indicate a fault in the present application.

Accordingly, such a modification would have been obvious since Krolski et al. indicates that a protection element entering pickup (which is understood by the examiner to be the same as an overcurrent condition based on what is commonly known in the art) was a well known and valid means for determining a fault condition, furthermore an overcurrent condition can cause damage to the power distribution system and to end user appliances connected to the power

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system suggesting that an overcurrent condition is contrary to the desired operation of the power system and thus indicative of a fault (see Krotski et al. column 1 line 10; Buell column 1 line 1 through line 2 and column 1 line 18 through line 64), thereby suggesting the obviousness of the modification.

Response to Arguments

5. Applicant's arguments filed September 9th 2003 have been fully considered but they are not persuasive. Addressing applicants arguments of paragraph 4 and paragraph 5 on page 6 of Amendment A – it is clear that Buell discloses if only one fault is determined monitoring the fault to determine if it evolves into another phase (see Buell column 6 line 8 through line 13) and if so opening only the at fault phases of the recloser (see column 5 line 35 through line 56).

Conclusion

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

U.S. Patent No. 4,912,591 to LeCourt because it teaches a recloser control with timers and counters before opening a phase.

U.S. Patent No. 2,539,416 to Goldsborough et al. because it teaches a recloser for a three phase system that uses current level determination to trip either a single phase if one phase is in fault or all three phases if more than one phase is in fault (see column 6 line 38 through line 51).

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U.S. Patent No. 2,320,861 to Goldsborough et al. because it teaches opening one phase if only one fault is determined and opening all three phases if more than one fault is determined (see page 5, right hand column line 46 through line 72).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Anthony T. Dougherty whose telephone number is (703) 305-4020. The examiner can normally be reached on Monday through Friday from 8 to 5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John E. Barlow can be reached on (703) 308-3126. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 308-7722 for regular communications and (703) 305-3431 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.



atd

September 22, 2003



John Barlow
Supervisory Patent Examiner
Technology Center 2800